

# THE ASTROPHYSICAL JOURNAL

2004 JANUARY 1

	Page
FORMATION OF DWARF GALAXIES DURING THE COSMIC REIONIZATION <span style="float: right;">Ⓔ</span> <i>Hajime Susa &amp; Masayuki Umemura</i>	1
DARK ENERGY CONSTRAINTS FROM WEAK-LENSING CROSS-CORRELATION COSMOGRAPHY <span style="float: right;">Ⓔ</span> <i>G. Bernstein &amp; B. Jain</i>	17
DO WE NEED STARS TO REIONIZE THE UNIVERSE AT HIGH REDSHIFTS? EARLY REIONIZATION BY DECAYING HEAVY STERILE NEUTRINOS <i>Steen H. Hansen &amp; Zoltán Haiman</i>	26
HIGH-RESOLUTION OBSERVATIONS OF THE COSMIC MICROWAVE BACKGROUND POWER SPECTRUM WITH ACBAR <span style="float: right;">Ⓔ</span> <i>C. L. Kuo, P. A. R. Ade, J. J. Bock, C. Cantalupo, M. D. Daub, J. Goldstein, W. L. Holzapfel, A. E. Lange, M. Lueker, M. Newcomb, J. B. Peterson, J. Ruhl, M. C. Runyan, &amp; E. Torbet</i>	32
A NEW H I 21 CENTIMETER ABSORBER ASSOCIATED WITH THE H I DEFICIENT INTERACTING GALAXIES G0248+430 <i>Chong-Yuan Hwang &amp; Shwu-Huey Chiou</i>	52
CHANDRA MULTIWAVELENGTH PROJECT. II. FIRST RESULTS OF X-RAY SOURCE PROPERTIES <span style="float: right;">Ⓔ</span> <i>D.-W. Kim, B. J. Wilkes, P. J. Green, R. A. Cameron, J. J. Drake, N. R. Evans, P. Freeman, T. J. Gaetz, H. Ghosh, F. R. Harnden, Jr., M. Karovska, V. Kashyap, P. W. Maksym, P. W. Ratzlaff, E. M. Schlegel, J. D. Silverman, H. D. Tananbaum, &amp; A. A. Vikhlinin</i>	59
THE ALIGNED $z \sim 1$ RADIO GALAXY 3C 280 <i>Susan E. Ridgway, Alan Stockton, &amp; Mark Lacy</i>	70
DISTRIBUTION OF FARADAY ROTATION MEASURE IN JETS FROM ACTIVE GALACTIC NUCLEI. I. PREDICTIONS FROM OUR SWEEPING MAGNETIC TWIST MODEL <i>Yutaka Uchida, Hiromitsu Kigure, Shigenobu Hirose, Masanori Nakamura, &amp; Robert Cameron</i>	88
THE ORIGIN OF EMISSION AND ABSORPTION FEATURES IN TON S180 CHANDRA OBSERVATIONS <i>A. Różańska, B. Czerny, A. Siemiginowska, A.-M. Dumont, &amp; T. Kawaguchi</i>	96
COMPARING CHANDRA AND SIRTf OBSERVATIONS FOR OBSCURED STARBURSTS AND ACTIVE GALACTIC NUCLEI AT HIGH REDSHIFT <i>D. Weedman, V. Charmandaris, &amp; A. Zezas</i>	106
THE PARSEC-SCALE STRUCTURE AND JET MOTIONS OF THE TeV BLAZARS IES 1959+650, PKS 2155-304, AND IES 2344+514 <i>B. Glenn Piner &amp; Philip G. Edwards</i>	115
PARSEC-SCALE PROPERTIES OF MARKARIAN 501 <i>M. Giroletti, G. Giovannini, L. Feretti, W. D. Cotton, P. G. Edwards, L. Lara, A. P. Marscher, J. R. Mattox, B. G. Piner, &amp; T. Venturi</i>	127
LARGE-FIELD MULTICOLOR STUDY OF A168: SUBCLUSTERS, DYNAMICS, AND LUMINOSITY FUNCTIONS <i>Yanbin Yang, Xu Zhou, Qirong Yuan, Zhaoji Jiang, Jun Ma, Hong Wu, &amp; Jiansheng Chen</i>	141

(Continued on inside page)

PUBLISHED BY THE UNIVERSITY OF CHICAGO PRESS FOR  
THE AMERICAN ASTRONOMICAL SOCIETY

ASJOAB 600(1, Pt. 1) 1-500 (2004)



REVISED RATES OF STELLAR DISRUPTION IN GALACTIC NUCLEI <i>Jianxiang Wang &amp; David Merritt</i>	Page 149
CHARACTERIZING THE STELLAR POPULATION IN NGC 1705-1 <sup>Ⓔ</sup> <i>Gerardo A. Vázquez, Claus Leitherer, Timothy M. Heckman, Danny J. Lennon, Duília F. de Mello, Gerhardt R. Meurer, &amp; Crystal L. Martin</i>	162
ON THE PHOTOMETRIC VARIABILITY OF BLUE SUPERGIANTS IN NGC 300 AND ITS IMPACT ON THE FLUX-WEIGHTED GRAVITY-LUMINOSITY RELATIONSHIP <i>Fabio Bresolin, Grzegorz Pietrzyński, Wolfgang Gieren, Rolf-Peter Kudritzki, Norbert Przybilla, &amp; Pascal Fouqué</i>	182
STAR FORMATION HISTORY AND EXTINCTION IN THE CENTRAL KILOPARSEC OF M82-LIKE STARBURSTS <sup>Ⓔ</sup> <i>Y. D. Mayya, A. Bressan, M. Rodríguez, J. R. Valdes, &amp; M. Chavez</i>	188
NUCLEOSYNTHESIS OF LIGHT ELEMENTS AND HEAVY <i>r</i> -PROCESS ELEMENTS THROUGH THE <i>ν</i> -PROCESS IN SUPERNOVA EXPLOSIONS <i>Takashi Yoshida, Mariko Terasawa, Toshitaka Kajino, &amp; Kohsuke Sumiyoshi</i>	204
THE FAR-INFRARED SPECTRUM OF THE SAGITTARIUS B2 REGION: EXTENDED MOLECULAR ABSORPTION, PHOTODISSOCIATION, AND PHOTOIONIZATION <i>Javier R. Goicoechea, Nemesio J. Rodríguez-Fernández, &amp; José Cernicharo</i>	214
A SPECTRAL LINE SURVEY OF SELECTED 3 MILLIMETER BANDS TOWARD SAGITTARIUS B2(N-LMH) USING THE NATIONAL RADIO ASTRONOMY OBSERVATORY 12 METER RADIO TELESCOPE AND THE BERKELEY-ILLINOIS-MARYLAND ASSOCIATION ARRAY. I. THE OBSERVATIONAL DATA <sup>Ⓔ</sup> <i>D. N. Friedel, L. E. Snyder, B. E. Turner, &amp; A. Remijan</i>	234
HIGH-RESOLUTION FAR-INFRARED OBSERVATIONS AND MODELS OF THE STAR FORMATION CORE OF G34.3+0.2C <i>Murray F. Campbell, Paul M. Harvey, Daniel F. Lester, &amp; David M. Clark</i>	254
SUBMILLIMETER CONTINUUM OBSERVATIONS OF NGC 7538 <i>Göran Sandell &amp; Albrecht Sievers</i>	269
SCUBA POLARIZATION MEASUREMENTS OF THE MAGNETIC FIELD STRENGTHS IN THE L183, L1544, AND L43 PRESTELLAR CORES <i>Richard M. Crutcher, D. J. Nutter, D. Ward-Thompson, &amp; J. M. Kirk</i>	279
BROAD RECOMBINATION LINE OBJECTS IN W49 NORTH ON 600 AU SCALES <i>C. G. De Pree, D. J. Wilner, A. J. Mercer, L. E. Davis, W. M. Goss, &amp; S. Kurtz</i>	286
GLOBAL ALFVÉN WAVE HEATING OF THE MAGNETOSPHERE OF YOUNG STARS <i>A. G. Elfmov, R. M. O. Galvão, V. Jatenco-Pereira, &amp; R. Opher</i>	292
RELATIVISTIC STARS WITH POLOIDAL AND TOROIDAL MAGNETIC FIELDS AND MERIDIONAL FLOW <i>Kunihito Ioka &amp; Misao Sasaki</i>	296
EQUATION OF STATE AND OPACITIES FOR HYDROGEN ATMOSPHERES OF MAGNETARS <sup>Ⓔ</sup> <i>Alexander Y. Potekhin &amp; Gilles Chabrier</i>	317
IDEAL MAGNETOHYDRODYNAMIC SOLUTION TO THE $\sigma$ PROBLEM IN CRAB-LIKE PULSAR WINDS AND GENERAL ASYMPTOTIC ANALYSIS OF MAGNETIZED OUTFLOWS <i>Nektarios Vlahakis</i>	324
FORMATION OF SEMIRELATIVISTIC JETS FROM MAGNETOSPHERES OF ACCRETING NEUTRON STARS: INJECTION OF HOT BUBBLES INTO A MAGNETIC TOWER <i>Y. Kato, M. R. Hayashi, &amp; R. Matsumoto</i>	338
XMM-NEWTON OBSERVATIONS OF PSR B1706-44 <i>K. E. McGowan, S. Zane, M. Cropper, J. A. Kennea, F. A. Córdova, C. Ho, T. Sasseeen, &amp; W. T. Vestrand</i>	343
TIMING AND SPECTRAL STUDIES OF LMC X-4 IN HIGH AND LOW STATES WITH <i>BeppoSAX</i> : DETECTION OF PULSATIONS IN THE SOFT SPECTRAL COMPONENT <i>S. Naik &amp; B. Paul</i>	351
DISAPPEARANCE OF HARD X-RAY EMISSION IN THE LAST <i>BeppoSAX</i> OBSERVATION OF THE Z SOURCE GX 349+2 <i>R. Iaria, T. Di Salvo, N. R. Robba, L. Burderi, L. Stella, F. Frontera, &amp; M. van der Klis</i>	358
TIME-SEQUENCED MULTI-RADIO FREQUENCY OBSERVATIONS OF CYGNUS X-3 IN FLARE <i>James C. A. Miller-Jones, Katherine M. Blundell, Michael P. Rupen, Amy J. Mioduszewski, Peter Duffy, &amp; Anthony J. Beasley</i>	368
THEORETICAL MODELING OF THE THERMAL STATE OF ACCRETING WHITE DWARFS UNDERGOING CLASSICAL NOVA CYCLES <i>Dean M. Townsley &amp; Lars Bildsten</i>	390
ON THE PURITY OF THE ZZ CETI INSTABILITY STRIP: DISCOVERY OF MORE PULSATING DA WHITE DWARFS ON THE BASIS OF OPTICAL SPECTROSCOPY <i>P. Bergeron, G. Fontaine, M. Billères, S. Boudreault, &amp; E. M. Green</i>	404
THE EVOLUTIONARY STATUS OF M3 RR LYRAE VARIABLE STARS: BREAKDOWN OF THE CANONICAL FRAMEWORK? <i>M. Catelan</i>	409
MATCHING STELLAR MODELS TO OSCILLATION DATA <i>D. B. Guenther &amp; Kevin I. T. Brown</i>	419

TEN MICRON OBSERVATIONS OF NEARBY YOUNG STARS   Ⓢ	Page 435
<i>Stanimir A. Metchev, Lynne A. Hillenbrand, &amp; Michael R. Meyer</i>	
SOLAR ENERGETIC PARTICLE ACCELERATION IN REFRACTING CORONAL SHOCK WAVES	451
<i>Rami Vainio &amp; Josef I. Khan</i>	
MAGNETOHYDRODYNAMIC SAUSAGE-MODE OSCILLATIONS IN CORONAL LOOPS	458
<i>Markus J. Aschwanden, Valery M. Nakariakov, &amp; Victor F. Melnikov</i>	
HELIOSEISMIC PROBING OF SOLAR VARIABILITY: THE FORMALISM AND SIMPLE ASSESSMENTS	464
<i>W. A. Dziembowski &amp; P. R. Goode</i>	
PROTOSOLAR CARBON ISOTOPIC COMPOSITION: IMPLICATIONS FOR THE ORIGIN OF METEORITIC ORGANICS	480
<i>Ko Hashizume, Marc Chaussidon, Bernard Marty, &amp; Kentaro Terada</i>	
MAGNETOHYDRODYNAMIC JUMP CONDITIONS FOR OBLIQUE RELATIVISTIC SHOCKS WITH GYROTROPIC PRESSURE	485
<i>Glen P. Double, Matthew G. Baring, Frank C. Jones, &amp; Donald C. Ellison</i>	
INSTRUCTIONS TO AUTHORS	i

